



## **CLEARING PERMIT**

*Granted under section 51E of the Environmental Protection Act 1986*

### **PERMIT DETAILS**

Area Permit Number: 5487/1

File Number: 2013/000781

Duration of Permit: From 31 August 2013 to 31 August 2018

### **ADVICE NOTE**

The funds referred to in condition 1 of this permit are intended for contributing towards the purchase of 18 hectares of vegetation with black cockatoo and Western Ringtail Possum habitat and value as an ecological linkage within the Shire of Harvey.

### **PERMIT HOLDER**

The Roman Catholic Bishop of Bunbury

### **LAND ON WHICH CLEARING IS TO BE DONE**

Lot 150 on Diagram 92130, Australind

### **AUTHORISED ACTIVITY**

The Permit Holder shall not clear more than 7.7 hectares of native vegetation within the area shaded yellow on attached Plan 5487/1a.

### **CONDITIONS**

- 1. Monetary contributions to a fund maintained for the purpose of establishing or maintaining vegetation (offset)**

Prior to undertaking any clearing authorised under this permit, the Permit Holder shall provide documentary evidence to the CEO that funding of \$126,000 has been transferred to the Department of Parks and Wildlife to purchase land for the purpose of establishing or maintaining vegetation.
- 2. Rehabilitation management plan**
  - (a) By 30 June 2014 the Permit Holder must submit a Rehabilitation Management Plan to the CEO, for the areas hatched red on attached Plan 5487/1b.
  - (b) The Rehabilitation Management Plan must be approved by the CEO prior to being implemented.
  - (c) The approved Rehabilitation Management Plan must be implemented.
  - (d) If it is necessary to modify the Rehabilitation Management Plan, the Permit Holder must submit the modified plan to the CEO.
  - (e) A modified Rehabilitation Management Plan must not be implemented until approved by the CEO.
  - (f) An approved modified Rehabilitation Management Plan supersedes any previous Rehabilitation Management Plan.
- 3. Dieback and weed control**

When undertaking any clearing or other activity authorised under this Permit, the Permit Holder must take the following steps to minimise the risk of the introduction and spread of *weeds* and *dieback*:

  - (a) clean earth-moving machinery of soil and vegetation prior to entering and leaving the area to be cleared;

- (b) ensure that no *dieback* or *weed*-affected soil, *mulch*, *fill* or other material is brought into the area to be cleared; and
- (c) restrict the movement of machines and other vehicles to the limits of the areas to be cleared.

**4. Records to be kept**

The Permit Holder must maintain records of the Rehabilitation Management Plan activities undertaken, in accordance with the Rehabilitation Management Plan in relation to condition 2 of this Permit.

**5. Reporting**

- (a) The Permit Holder must provide to the CEO on or before 30 June of each year, a written report:
  - (i) of records required under condition 4 of this Permit; and
  - (ii) concerning activities done by the Permit Holder under this Permit between 1 January to 31 December of the preceding calendar year.
- (b) If no clearing authorised under this Permit was undertaken between 1 January to 31 December of the preceding calendar year, a written report confirming that no clearing under this permit has been carried out, must be provided to the CEO on or before 30 June of each year.
- (c) Prior to 31 May 2018, the Permit Holder must provide to the CEO a written report of records required under condition 4 of this Permit where these records have not already been provided under condition 5(a) of this Permit.

**DEFINITIONS**

The following meanings are given to terms used in this Permit:

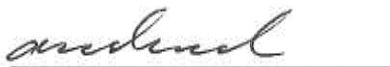
*dieback* means the effect of *Phytophthora* species on native vegetation;

*fill* means material used to increase the ground level, or fill a hollow;

*mulch* means the use of organic matter, wood chips or rocks to slow the movement of water across the soil surface and to reduce evaporation;

*weed/s* means any plant -

- (a) that is a declared pest under section 22 of the *Biosecurity and Agriculture Management Act 2007*; or
- (b) published in the former Department of Environment and Conservation Regional Weed Assessments, regardless of ranking; or
- (c) not indigenous to the area concerned; and



M Warnock  
MANAGER  
NATIVE VEGETATION CONSERVATION BRANCH

*Officer delegated under Section 20  
of the Environmental Protection Act 1986*

1 August 2013

# Plan 5487/1a



## LEGEND

-  Road Centrelines
-  Clearing Instruments
-  Areas Approved to Clear
- Perth Metropolitan North  
15cm Orthomosaic - Landgate  
2011**



0 200 m

Scale 1:7365  
(Approximate when reproduced at A4)

Geocentric Datum Australia 1994

Note: the data in this map have not been projected. This may result in geometric distortion or measurement inaccuracies.

*M. Warnock* Date 1/8/13

M. Warnock

Officer with delegated authority under Section 20 of the Environmental Protection Act 1986

Information derived from this map should be confirmed with the data custodian acknowledged by the agency acronym in the legend.



Government of Western Australia  
Department of Environment Regulation

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# Plan 5487/1b



## LEGEND

-  Road Centrelines
-  Clearing Instruments
-  Areas Subject to Conditions
- Perth Metropolitan North  
15cm Orthomosaic - Landgate  
2011**



0 ————— 150 m

Scale 1:6547

(Approximate when reproduced at A4)

Geocentric Datum Australia 1994

Note: the data in this map have not been projected. This may result in geometric distortion or measurement inaccuracies.

*M. Warnock* Date 1/8/13

M. Warnock

Officer with delegated authority under Section 20 of the Environmental Protection Act 1986

Information derived from this map should be confirmed with the data custodian acknowledged by the agency acronym in the legend.



Government of Western Australia  
Department of Environment Regulation

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\* Project Data is denoted by asterisk. This data has not been quality assured. Please contact map author for details.



# Clearing Permit Decision Report

Government of Western Australia  
Department of Environment Regulation

## 1. Application details

### 1.1. Permit application details

Permit application No.: 5487/1  
Permit type: Area Permit

### 1.2. Proponent details

Proponent's name: The Roman Catholic Bishop of Bunbury

### 1.3. Property details

Property: LOT 150 ON DIAGRAM 92130 (Lot No. 150 LEISURE AUSTRALIND 6233)  
Local Government Area: Shire of Harvey  
Colloquial name:

### 1.4. Application

Clearing Area (ha)	No. Trees	Method of Clearing	For the purpose of:
7.7		Mechanical Removal	Building or Structure

### 1.5. Decision on application

Decision on Permit Application: Grant  
Decision Date: 1 August 2013

## 2. Site Information

### 2.1. Existing environment and information

#### 2.1.1. Description of the native vegetation under application

Vegetation Description	Clearing Description	Vegetation Condition	Comment
Beard Vegetation Association: 1000 - Mosaic: Medium forest; jarrah-marri/Low woodland; Banksia/Low forest; teatree ( <i>Melaleuca</i> spp.) (Shepherd et al. 2001).	The application is to clear up to 7.7 hectares of native vegetation within Lot 150 on Diagram 92130, Australind, for the purpose of implementing the Bunbury Catholic College Australind Campus development.	Excellent: Vegetation structure intact; disturbance affecting individual species, weeds non-aggressive (Keighery 1994)	The vegetation under application is an upland community of <i>Banksia attenuata</i> , <i>Eucalyptus marginata</i> , <i>Corymbia calophylla</i> low woodland over <i>Kunzea glabrescens</i> tall open scrub over <i>Dasyopogon bromeliifolius</i> herbland (DEC 2013a).
Heddlle Vegetation Complex: Bassendean Complex Central and South - vegetation ranges from woodland of <i>Eucalyptus marginata</i> (Jarrah) - <i>Allocasuarina fraseriana</i> (Sheoak) - <i>Banksia</i> species to low woodland of <i>Melaleuca</i> species, and sedgeland on the moister sites. This area includes the transition of <i>Eucalyptus marginata</i> (Jarrah) to <i>Eucalyptus todtiana</i> (Pricklybark) in the vicinity of Perth (Heddlle et al. 1980).		To  Completely Degraded: No longer intact; completely/almost completely without native species (Keighery 1994)	Vegetation description and condition were determined through aerial imagery, supporting documentation provided by applicant (Eco Logic Environmental Services Pty Ltd 2013a) and site inspection (DEC 2013a).

## 3. Assessment of application against clearing principles

### (a) Native vegetation should not be cleared if it comprises a high level of biological diversity.

**Comments** **Proposal is at variance to this Principle**

The amended application is to clear up to 7.7 hectares of native vegetation within Lot 150 on Diagram 92130, Australind, for the purpose of implementing the Bunbury Catholic College Australind Campus development. The applicant has advised that approximately 1.5 hectares of the application area has been identified for partial retention (CODA 2013).

A flora and vegetation survey conducted over the application area defined nine discrete vegetation types; four forest communities and five woodland communities (Eco Logic Environmental Services Pty Ltd 2013a). The vegetation under application can broadly be described as an upland community of *Banksia attenuata*, *Eucalyptus marginata*, *Corymbia calophylla* low woodland over *Kunzea glabrescens* tall open scrub over *Dasyopogon bromeliifolius* herbland (DEC 2013a). *Melaleuca preissiana* woodlands occur within the western and eastern edges of the application area (DEC 2013a).

Approximately five hectares of the vegetation under application ranges from good to excellent (Keighery 1994) condition and approximately 2.7 hectares is in degraded to completely degraded (Keighery 1994) condition.

The majority of the vegetation under application is infested with *Phytophthora cinnamomi* and has historically been harvested for timber. As a result, the presence of *Banksia* species and *Eucalyptus marginata* is heavily reduced in most areas (DEC 2013a). An area approximately one hectare in size, in very good to excellent (Keighery 1994) condition, appears to be unaffected by timber harvesting and *Phytophthora cinnamomi*.

There are numerous priority flora recorded within the local area (10 kilometre radius). A flora report over the application area recorded four individuals of a priority four species (Eco Logic Environmental Services Pty Ltd 2013a). A Department of Environment and Conservation (DEC) site inspection identified an additional four individuals of this species (DEC 2013a). This species has a large geographical distribution, with 24 known populations of which 11 are within conservation estates. Therefore, the loss of these individuals is likely to have minimal impact on the conservation status of this species (DEC 2013b).

There are several priority ecological communities (PEC) within the local area (10 kilometre radius). An area of the vegetation in the south of the application area has floristic similarities to floristic community type 'Low lying *Banksia attenuata* woodlands or shrublands' (SCP21c, priority 3) (Eco Logic Environmental Services Pty Ltd 2013a). However, the vegetation under application includes additional species not found in SCP21c, including *Banksia illicifolia* and *Corymbia calophylla*, as well as not including some species of SCP21c.

The application area occurs in an area of vegetation identified under the Greater Bunbury Regional Scheme as the McLarty/Kemerton/Twin Rivers/Preston River/Gwindinnup ecological link (North- South) (EPA 2003). This same linkage is identified in the South West Regional Ecological Linkages (SWREL) (Molloy et al. 2009). Under the SWREL Project the adjacent vegetation has a proximity value of 1a to this linkage, meaning the vegetation has an edge touching, or is less than 100 metres from, a linkage axis line (Molloy et al. 2009).

These linkages provide an important corridor for the dispersal of native fauna as well as consisting of significant breeding and foraging habitat for local fauna. The vegetation under application in good to excellent (Keighery 1994) condition is likely to contribute towards this linkage. The proposed clearing will further degrade the quality of the linkage.

The mapped vegetation types of the application area retain less than the recommended threshold level (30 percent), below which species loss appears to accelerate exponentially at an ecosystem level (Commonwealth of Australia 2001).

Evidence of five conservation significant fauna species have been observed within the application area; Carnaby's Cockatoo (*Calyptorhynchus latirostris*; rare or likely to become extinct, Wildlife Conservation Act 1950 (WC Act); endangered, Environment Protection and Biodiversity Conservation Act 1999 (EPBC Act), Forest red-tailed black-Cockatoo (*Calyptorhynchus banksii* subsp. *Naso*; rare or likely to become extinct, WC Act; vulnerable, EPBC Act), Baudin's Cockatoo (*Calyptorhynchus baudinii*; rare or likely to become extinct, WC Act; vulnerable, EPBC Act), Western Ringtail Possum (*Pseudocheirus occidentalis*; rare or likely to become extinct, WC Act; vulnerable, EPBC Act) and Rainbow Bee-Eater (*Merops ornatus*; Migratory, EPBC Act) (Harewood 2013).

The application area is in close proximity to an ecological linkage, contains significant habitat for fauna, contains priority flora and is located in an area that has been extensively cleared. Therefore, the proposed clearing is at variance to this principle.

To address the residual environmental impacts identified in this assessment the Department of Environment Regulation has approved the applicant's offset package which comprises contributing funds towards the purchase of 18 hectares of similar habitat in the South West to offset the loss of the 5 hectares of vegetation in very good (Keighery, 1994) which is proposed to be cleared under this application. The applicant has also committed to rehabilitating approximately 3 hectares of vegetation located within Lot 150.

#### Methodology

#### References:

Commonwealth of Australia 2001  
DEC 2013a  
DEC 2013b  
CODA 2013  
Eco Logic Environmental Services Pty Ltd 2013a  
Harewood 2013  
Keighery 1994  
Molloy et al. 2009  
GIS Databases:  
- SAC Biodatasets

**(b) Native vegetation should not be cleared if it comprises the whole or a part of, or is necessary for the maintenance of, a significant habitat for fauna indigenous to Western Australia.**

**Comments**

**Proposal is at variance to this Principle**

There are numerous conservation significant fauna mapped within the local area (10 kilometre radius) (DEC 2007-). These include Carnaby's cockatoo, Forest red-tailed black-cockatoo, Baudin's cockatoo, Western Ringtail Possum and Rainbow Bee-Eater (DEC 2007-).

Foraging evidence attributed to the three black cockatoo species was observed within the application area (Harewood 2013). Black cockatoos forage on the seeds, nuts and flowers of a large variety of plants including proteaceous and eucalyptus species as well as *Corymbia calophylla* (Commonwealth of Australia 2012). The majority of the vegetation under application is infested with *Phytophthora cinnamomi* and has historically been harvested for timber. As a result, the presence of *Banksia* species and *Eucalyptus marginata* is heavily reduced in some areas (DEC 2013a). An area in the south of the application area, approximately one hectare in size, is in very good to excellent (Keighery 1994) condition and appears to be unaffected by timber harvesting and *Phytophthora cinnamomi* (DEC 2013a). The occurrence of *Banksia* species and *Eucalyptus marginata* in this area appears to be unaffected. *Corymbia calophylla* are present throughout the application area.

Therefore, the vegetation under application, in particular the southern portion of the application area, is likely to provide foraging habitat for the three black cockatoo species.

The three black cockatoo species nest in the hollows of large eucalyptus trees that have minimum diameter, measured at 1.5 metres from the base of the tree, of 500 millimetres (Commonwealth of Australia 2012). A fauna survey was conducted over the property that the application area occurs within. Within the 10 hectare property, 66 habitat trees were recorded, with two trees containing hollows large enough to be utilised by cockatoos (Harewood 2013). Of these habitat trees, 51 are located within the application area, with 40 to be cleared. Thirty two of these trees occur in areas of good (Keighery 1994) or better condition vegetation and eight within areas of degraded (Keighery 1994) or worse condition vegetation. The application area provides potential nesting habitat for black cockatoos.

During a daytime fauna survey of the property under application, Western Ringtail Possum scats and dreys were identified (Harewood 2013). During a nocturnal survey, one Western Ringtail Possum was observed within the southern portion of the property under application, but not within the application area (Harewood 2013). Within the surveyed area, nineteen habitat trees containing hollows have the potential to be used by Western Ringtail Possums, dependent on the hollows being of suitable size (Harewood 2013). Although the application area does not contain *Agonis flexuosa*, the favoured food source of Western Ringtail Possums, the vegetation under application is currently being utilised by Western Ringtail Possums. Therefore, the proposed clearing may comprise significant habitat for this species.

A fauna survey identified one individual Rainbow Bee-eater within the application area (Harewood 2013). The Rainbow Bee-eater is a migratory bird with a distribution across most of mainland Australia (DSEWPC 2013). The total population size has not been estimated, but is assumed to be reasonably large (DSEWPC 2013). Given the small number of individuals that are likely to utilise the vegetation under application, and the extensive home range of this species, the proposed clearing is unlikely to significantly impact this species.

During a DEC site inspection, several Western Grey Kangaroos (*Macropus fuliginosus*) were observed (DEC 2013a). Although not of conservation significance, given the property under application is bordered on all sides by cleared land and major roads, the movement and dispersal of the kangaroos is restricted.

The application area occurs in an area of vegetation identified under the Greater Bunbury Regional Scheme as the McLarty/Kemerton/Twin Rivers/Preston River/Gwindinnup ecological link (North- South) (EPA 2003). This same linkage is identified in the South West Regional Ecological Linkages (SWREL) (Molloy et al. 2009). Under the SWREL Project the vegetation has a proximity value of 1a to this linkage, meaning the vegetation has an edge touching, or is less than 100 metres from, a linkage axis line (Molloy et al. 2009).

These linkages provide an important corridor for the dispersal of native fauna as well as consisting of significant breeding and foraging habitat for local fauna. The ecological linkage has been previously disturbed to the north and west of the application area through clearing for subdivision development. The proposed clearing will further expand the area of alienated land and make a larger habitat gap between vegetation.

Given the above, the proposed clearing is at variance to this principle.

To address the residual environmental impacts identified in this assessment the Department of Environment Regulation has approved the applicant's offset package which comprises contributing funds towards the purchase of 18 hectares of similar habitat in the South West to offset the loss of the 5 hectares of vegetation in very good (Keighery, 1994) which is proposed to be cleared under this application. The applicant has also committed to rehabilitating approximately 3 hectares of vegetation located within Lot 150.

**Methodology**

**References:**

Commonwealth of Australia 2012  
DEC 2007-

DEC 2013a  
DSEWPC 2013  
EPA 2003  
Harewood 2013  
Keighery 1994  
Molloy et al. 2009  
GIS Databases:  
- SAC Biodatasets

**(c) Native vegetation should not be cleared if it includes, or is necessary for the continued existence of, rare flora.**

**Comments Proposal is not likely to be at variance to this Principle**

There are several records of rare flora species within the local area (10 kilometre radius).

One rare flora species occurs on bare patches of white sand over dark sandy loam on low-lying areas near ephemeral lakes, or slopes adjacent to winter wet depressions, swamps and watercourses (Eco Logic Environmental Services Pty Ltd 2013a). It is associated with Banksia woodland and scattered Marri and most occur with Kunzea (Eco Logic Environmental Services Pty Ltd 2013a). The vegetation within the application area is suitable habitat for this species (DEC 2013a).

A flora survey did not identify the presence of any rare flora within the application area (Eco Logic Environmental Services Pty Ltd 2013a). However, the survey was undertaken in late spring, which is not the optimal time for the identification of the above mentioned rare flora species (DEC 2013a).

An appropriately timed, targeted survey did not identify the presence of this species within the application area (Eco Logic Environmental Services Pty Ltd 2013b).

Therefore, the proposed clearing is not likely to be at variance to this principle.

**Methodology** References:  
DEC 2013a  
Eco Logic Environmental Services Pty Ltd 2013a  
Eco Logic Environmental Services Pty Ltd 2013b  
GIS Databases:  
- SAC Biodatasets

**(d) Native vegetation should not be cleared if it comprises the whole or a part of, or is necessary for the maintenance of a threatened ecological community.**

**Comments Proposal is not likely to be at variance to this Principle**

There are four threatened ecological communities mapped within the local area (10 kilometre radius). The closest of these communities is 'Eucalyptus calophylla-Eucalyptus marginata woodlands on sandy clay soils of the southern Swan Coastal Plain' (vulnerable), which is located approximately 500 metres from the application area.

The vegetation under application is consistent with the floristic community type 'Central banksia attenuata, Eucalyptus marginata woodlands' (FCT21a) (DEC 2013a).

Given the vegetation under application does not represent a threatened ecological community, the proposed clearing is not likely to be at variance to this principle.

**Methodology** References:  
DEC 2013a  
GIS Databases:  
- SAC Biodatasets

**(e) Native vegetation should not be cleared if it is significant as a remnant of native vegetation in an area that has been extensively cleared.**

**Comments Proposal is at variance to this Principle**

Aerial photography indicates the local area (10 kilometre radius) is approximately 30 percent vegetated.

The IBRA Bioregion (Swan Coastal Plain) and the local government agency (Shire of Harvey) retain approximately 39 percent and 52 percent of their respective pre-European extents (Government of Western Australia 2013).

The application area is mapped as Beard Vegetation Association 1000, which retains approximately 25 172 hectares (27 percent) of its pre-European extent within the Swan Coastal Plain IBRA Bioregion.



The area is mapped as Heddle Vegetation Complex Bassendean Complex Central and South, which retains approximately 24 610 hectares (28 percent) of its pre-European extent within the Swan Coastal Plain IBRA Bioregion. Approximately three percent of Bassendean Complex Central and South is held in secure land tenure (Government of Western Australia 2011).

The national objectives and targets for biodiversity conservation in Australia has a target to prevent clearance of ecological communities with an extent below 30 percent of that present pre-1750, below which species loss appears to accelerate exponentially at an ecosystem level (Commonwealth of Australia 2001).

The vegetation associations mapped over the application area both have less than 30 percent of their pre-European extents remaining. A small percentage of the vegetation remaining in these vegetation associations is held in secure DEC tenure.

Approximately five hectares of the vegetation under application is in good to excellent (Keighery 1994) condition and is representative of the mapped vegetation types. The application area is a significant remnant of native vegetation, as it is in close proximity to an ecological linkage, contains significant habitat for fauna, contains priority flora and occurs within vegetation associations that have been extensively cleared.

Given the above, the proposed clearing is at variance to this principle.

To address the residual environmental impacts identified in this assessment the Department of Environment Regulation has approved the applicant's offset package which comprises contributing funds towards the purchase of 18 hectares of similar habitat in the South West to offset the loss of the 5 hectares of vegetation in very good (Keighery, 1994) which is proposed to be cleared under this application. The applicant has also committed to rehabilitating approximately 3 hectares of vegetation located within Lot 150.

	Pre-European (ha)	Current Extent (ha)	Remaining (%)	Extent in DEC Managed Lands (%)
IBRA Bioregion*				
Swan Coastal Plain	1 501 209	587 833	39	35
Shire*				
Shire of Harvey	170 788	89 075	52	75
Beard Vegetation Association in Bioregion*				
1000	94 175	25 172	27	17
Heddle Vegetation Complex **				
Bassendean Complex Central and South	87 318	24 610	28	3

\* Government of Western Australia 2013

\*\* Heddle et al. 1980

#### Methodology

##### References:

Commonwealth of Australia 2001

Government of Western Australia 2013

Heddle et al. 1980

Keighery 1994

##### GIS Databases:

- Bunbury 50cm Orthomosaic - Landgate 2008

- Heddle Vegetation Complexes

- NLWRA, Current extent of Native Vegetation

- Pre-European Vegetation

#### (f) Native vegetation should not be cleared if it is growing in, or in association with, an environment associated with a watercourse or wetland.

##### Comments

##### **Proposal is at variance to this Principle**

There are numerous watercourses within the local area (10 kilometre radius). An earth dam is mapped within the application area.

The proposed clearing occurs within a multiple use wetland. Multiple use wetlands are wetlands that score poorly on natural attributes and are considered to lack ecological function, the proposed land use is consistent with this category of wetland (WAPC 2005).

Melaleuca preissiana occurs within the western and eastern edges of the application area, and suggests that

the adjacent cleared vegetation would most likely have been predominately wetland vegetation. The presence of this species within the application area most likely represents the transitional vegetation between wetland vegetation and the dominant vegetation type of the application area (DEC 2013a).

Given the above, the proposed clearing is at variance to this principle.

**Methodology** References:  
DEC 2013a  
WAPC 2005  
GIS Databases:  
- Geomorphic wetlands  
- Hydrography, Linear

**(g) Native vegetation should not be cleared if the clearing of the vegetation is likely to cause appreciable land degradation.**

**Comments Proposal may be at variance to this Principle**

The soil within the application area is mapped as Cb39, which Northcote et al. (1960 - 1968) describes as subdued dune-swale terrain: chief soils are leached sands on the low dunes.

The application area has a mean annual rainfall of 900mm. Given the porous nature of the soil, significant water erosion is unlikely to occur.

The main land degradation risk associated with this sandy soil type is wind erosion. Without vegetation cover, the proposed clearing may result in land degradation and may be at variance to this principle.

The applicant has advised that wind erosion will be managed in accordance with a Construction Environmental Management Plan (Strategen Environmental Consultants 2013c).

**Methodology** References:  
Northcote et al. 1960-1968  
Strategen Environmental Consultants 2013c  
GIS Datasets:  
- Mean annual rainfall  
- Soils Statewide

**(h) Native vegetation should not be cleared if the clearing of the vegetation is likely to have an impact on the environmental values of any adjacent or nearby conservation area.**

**Comments Proposal may be at variance to this Principle**

The closest conservation area to the proposed clearing is Morangarel Nature Reserve, which is located approximately 4.5 kilometres south-west of the application area.

The application area occurs in an area of vegetation identified under the Greater Bunbury Regional Scheme as the McLarty/Kemerton/Twin Rivers/Preston River/Gwindinnup ecological link (North- South) (EPA 2003). This same linkage is identified in the South West Regional Ecological Linkages (SWREL) (Molloy et al. 2009). Under the SWREL Project the vegetation has a proximity value of 1a to this linkage, meaning the vegetation has an edge touching, or is less than 100 metres from, a linkage axis line (Molloy et al. 2009).

These linkages provide an important corridor for the dispersal of native fauna as well as consisting of significant breeding and foraging habitat for local fauna. The vegetation under application in good to excellent (Keighery 1994) condition is likely to contribute towards this linkage.

The ecological linkage has been previously disturbed to the north and west of the application area through clearing for subdivision development. The proposed clearing will further expand the area of alienated land and make a larger habitat gap between vegetation to the north and south.

Therefore, the proposed clearing may be at variance to this principle.

**Methodology** References:  
EPA 2003  
Keighery 1994  
Molloy et al. 2009  
GIS Databases:  
- DEC Tenure  
- Bunbury 50cm Orthomosaic - Landgate 2008

**(i) Native vegetation should not be cleared if the clearing of the vegetation is likely to cause deterioration in the quality of surface or underground water.**

**Comments Proposal may be at variance to this Principle**

The proposed clearing occurs within a multiple use wetland. The only standing surface water within the property under application is an earth dam, which is located within the proposed clearing area. The clearing of vegetation adjacent to the dam may cause some short term sedimentation and may temporarily impact the quality of surface water.

The groundwater salinity within the application area is 500-1000 milligrams per litre of Total Dissolved Solids. This level of groundwater salinity is considered to be marginal.

Given the above, the proposed clearing may be at variance to this principle.

**Methodology GIS Databases:**

- Geomorphic Wetlands, Swan Coastal Plain
- Groundwater Salinity, Statewide
- Hydrography, Linear

**(j) Native vegetation should not be cleared if clearing the vegetation is likely to cause, or exacerbate, the incidence or intensity of flooding.**

**Comments Proposal is not likely to be at variance to this Principle**

The soil within the application area is mapped as Cb39, which Northcote et al. (1960 - 1968) describes as subdued dune-swale terrain: chief soils are leached sands on the low dunes.

Given the porous nature of the sandy soils of the application area, the proposed clearing is unlikely to cause or exacerbate flooding. Therefore it is not likely to be at variance to this principle.

**Methodology References:**

Northcote et al. 1960 - 1968

**GIS Databases:**

- Bunbury 50cm Orthomosaic - Landgate 2008
- Soils, Statewide

**Planning instrument, Native Title, Previous EPA decision or other matter.**

**Comments**

The application is to clear native vegetation for the purpose of developing a secondary Bunbury Catholic College campus in Australind (Strategen Environmental Consultants 2013a).

To address the residual environmental impacts identified in this assessment the Department of Environment Regulation has approved the applicant's offset package which comprises contributing funds towards the purchase of 18 hectares of similar habitat in the South West to offset the loss of the 5 hectares of vegetation in very good (Keighery, 1994) which is proposed to be cleared under this application. The applicant has also committed to rehabilitating approximately 3 hectares of vegetation located within Lot 150.

The Department of Environment Regulation has also taken into consideration the school's commitment to the environment and sustainability. The Catholic Education System runs science and sustainability programs which has seen students plant approximately 6000 trees in the South West region.

The area under application is zoned as 'Public Purpose' under the Shire of Harvey District Planning Scheme No. 1 (Department of Planning 1996). The local scheme zoning classification allows for 'Additional Uses' as a Church, Presbytery Hall and Parish Centre (Department of Planning 1996). The applicant has advised that the proposed development is consistent with the zoning under the Shire of Harvey District Planning Scheme No. 1 (Strategen Environmental Consultants 2013a).

The area under application is currently zoned as 'Urban Deferred' under the Greater Bunbury Regional Scheme (GBRS) (WAPC 2000). 'Urban Deferred' designates land suitable for future urban development. The zoning of the property will need to be lifted from 'Urban Deferred' to 'Urban' in order for the proposed land use to be compatible. The process to lift the 'Urban Deferred' commenced on 31 July 2013 with a 8 to 10 working day turn around period.

The application area has a moderate to low risk of Acid Sulfate Soil (ASS) material occurring within 3 metres of the natural soil surface, meaning the area is not generally suitable for ASS formation, or ASS is highly localised or sporadic (Landgate 2013).

The Bunbury Catholic College Australind Campus Development proposal was referred to the Department of Sustainability, Environment, Water, Population and Communities (DSEWPC) under the EPBC Act. DSEWPC determined the proposed development was not a controlled action (DSEWPC 2013).

The application area is located within the Brunswick River Surface Water Area and the Bunbury Groundwater Area covered by the Rights in Water and Irrigation Act 1914.

An Aboriginal Site of Significance is partially located within the application area. The applicant will be notified of their responsibilities.

No public submissions have been received in relation to this application.

**Methodology**   References:  
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DSEWPC 2013  
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GIS Databases:  
- Aboriginal Sites of Significance  
- RIWI Act areas  
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## 5. Glossary

Term	Meaning
BCS	Biodiversity Coordination Section of DEC
CALM	Department of Conservation and Land Management (now BCS)
DAFWA	Department of Agriculture and Food
DEC	Department of Environment and Conservation
DEP	Department of Environmental Protection (now DEC)
DoE	Department of Environment
DoIR	Department of Industry and Resources
DRF	Declared Rare Flora
EPP	Environmental Protection Policy
GIS	Geographical Information System
ha	Hectare (10,000 square metres)
TEC	Threatened Ecological Community
WRC	Water and Rivers Commission (now DEC)